Q1. In the annual examination Ankita got 10% less marks than Eakta in Mathematics. Ankita got 81 marks. The marks of Eakta are:
(a) 90
(b) 87
(c) 88
(d) 89

Q2. The ratio of the number of boys and girls in a school is 2 : 3. If 25% of the boys and 30% of the girls are scholarship holders, the percentage of the school students who are not scholarship holders is:
(a) 72%
(b) 36%
(c) 54%
(d) 60%

Q3. In an examination, 35% of the candidates failed in Mathematics and 25% in English. If 10% failed in both mathematics and English, then how much percent of candidates passed in both the subjects?
(a) 50%
(b) 55%
(c) 57%
(d) 60%

Q4. In a village, each of the 60% of families has a cow; each of the 30% of families has a buffalo and each of the 15% of families has both a cow and a buffalo. In all there are 96 families in the village. How many families do not have a cow or a buffalo?
(a) 20
(b) 24
(c) 26
(d) 28

Q5. The ratio of the number of boys and girls in a college is 3 : 2. If 20% of boys and 25% of girls are adults, the percentage of those students who are not adults is:
(a) 58%
(b) 67.5%
(c) 78%
(d) 82.5%

Q6. The ratio of the number of boys to that of girls in a school is 4 : 1. If 75% of boys and 70% of the girls are scholarship-holders, then the percentage of students who do not get scholarship is:
(a) 50%
(b) 28%
(c) 75%
(d) 26%

Q7. The length of a rectangle is increased by 10% and breadth decreased by 10%. Then the area of the new rectangle is:
(a) neither decreased nor increased
(b) increased by 1%
(c) decreased by 1%
(d) decreased 10%

Q8. If the price of a commodity is increased by 50%. By what fraction must its consumption be reduced so as to keep the same expenditure on its consumption?
(a) 1/4
(b) 1/3
(c) 1/2
(d) 2/3

Q9. A reduction of 25% in the price of rice enables Bhuvnesh to buy two kg more rice for Rs. 240. The reduced per kg price of rice is
(a) Rs. 30
(b) Rs. 25
(c) Rs. 20
(d) Rs. 15

Q10. The price of a certain item is increased by 15%. If a consumer wants to keep his expenditure on the item the same as before, how much percent must he reduce his consumption of that item?
(a) 15%
(b) $13\frac{1}{23}\%$
(c) $16\frac{2}{3}\%$
(d) $10\frac{20}{23}\%$

Q11. If sin θ × cos θ = 1/2. The value of sin θ – cos θ is where 0° < θ < 90°?
(a) 0
(b) √2
(c) 2
(d) 1

Q12. The value of cos² 20° + cos² 70° ?

(a) √2

(b) 1

(c) 1/3

(d) 2

Q13.

The value of $\frac{\sin\theta}{1+\cos\theta} + \frac{\sin\theta}{1-\cos\theta}$ is

(a) 2sin θ

(b) 2cos θ

(c) 2sec θ

(d) 2cosec θ

Q14.

If $\tan\theta = \frac{8}{15}$,

the value of $\frac{\sqrt{1-\sin\theta}}{\sqrt{1+\sin\theta}}$ is

(a) 1/5

(b) 2/5

(c) 3/5

(d) 0

Q15.

If $\frac{\cos\theta}{1-\sin\theta} + \frac{\cos\theta}{1+\sin\theta} = 4$,

then the value of θ (0 < θ < 90°) is

(a) 60°

(b) 45°

(c) 30°

(d) 35°

Q16. If sec 15θ = cosec 15θ (0° < θ < 10°) then the value of θ is

(a) 9°

(b) 5°

(c) 8°

(d) 3°

Q17. If tan θ = tan 30°.tan 60° and θ is an acute angle, then 2θ is equal to

(a) 30°

(b) 45°

(c) 90°

(d) 0°

Q18. If $x^2 = \sin^2 30° + 4 \cot^2 45° - \sec^2 60°$, then the value of x (x > 0) is

(a) –1/2

(b) 1

(c) 0

(d) 1/2

Q19. If $7 \sin^2 \theta + 3 \cos^2 \theta = 4$ then the value of sec θ + cosec θ is

(a) $\dfrac{2}{\sqrt{3}} - 2$

(b) $\dfrac{2}{\sqrt{3}} + 2$

(c) $\dfrac{2}{\sqrt{3}}$

(d) None of these

Q20.

The value of $\left(\dfrac{\sin\theta + \sin\phi}{\cos\theta + \cos\phi} + \dfrac{\cos\theta - \cos\phi}{\sin\theta - \sin\phi} \right)$ is
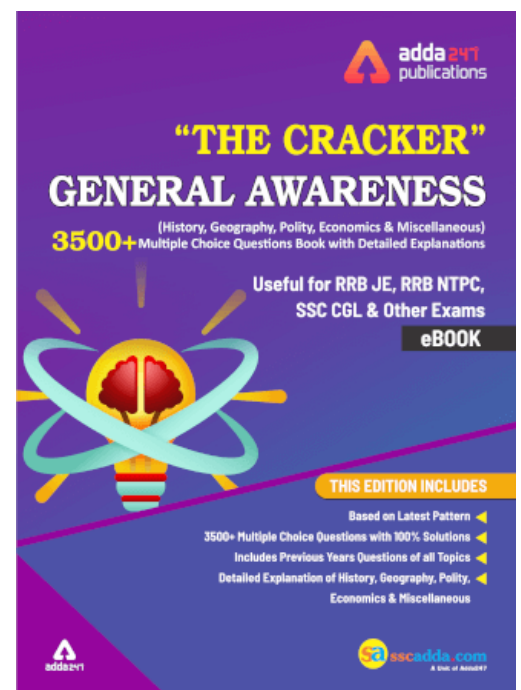
(a) 1

(b) 2

(c) 1/2

(d) 0

Q21. The average weight of A, B and C is 45 kg. If the average weight of A and B be 40 kg and that of B and C be 43 kg then the weight of B is?

(a) 31 kg

(b) 32 kg

(c) 29.5 kg

(d) 35 kg

Q22. The batting average for 40 innings of a cricket player is 50 runs. His highest score exceeds his lowest score by 172 runs. If these two innings are excluded, the average of the remaining 38 innings is 48 runs. The highest score of the player is?

(a) 165

(b) 170

(c) 172

(d) 174

Q23. The average of 7 consecutive number is 20. The largest of these number is?
(a) 20
(b) 23
(c) 24
(d) 26

Q24. Mukesh has twice as much money as Soham. Soham has 50% more money than Pankaj. If the average money with them is Rs. 110 then Mukesh has?
(a) 155
(b) 160
(c) 180
(d) 175

Q25. The average daily income of 7 men, 11 women and 2 boys is Rs. 257. 50. If the average daily income of the men is Rs. 10 more than that of woman and the average daily income of the women is Rs. 10 more than that of boys the average daily income of a man is?
(a) Rs. 277.5
(b) Rs. 250
(c) Rs. 265
(d) Rs. 257

Q26. A batman has certain average of runs for 12 innings. In the 13th inning he scores 96 runs there by increasing his average by 5 runs. What will be his average after 13th inning?
(a) 28
(b) 32
(c) 36
(d) 42

Q27. A team of 8 persons joins in a shooting competition. The best marksman scored 85 points. If he had scored 92 points, the average score for the team would have been 84. The number of points the team scored was?
(a) 672
(b) 665
(c) 645
(d) 588

Q28. A librarian purchased 60 story books for his library. But he found that he could get 4 extra books by spending Rs. 336 more and then the overall average price per book would be reduced by Rupees 1. The previous average price of each book was?
(a) Rs. 84
(b) Rs. 83
(c) Rs. 68
(d) Rs. 100

Q29. In an exam, the average marks obtained by John in English, Math, Hindi and Drawing were 50. His average mark in Math, Science, Social Studies and Craft were 70. If the average mark in all seven subjects is 58, his score in Math was?

(a) 50
(b) 52
(c) 60
(d) 74

Q30. The average weight of 3 men, A, B and C is 84 kg. Another man D joins the group and the average now becomes 80 kg. If another man E whose weight is 3 kg more than that of D, replaces A then the average weight of B, C, D and E becomes 79 kg. What is the weight of A?

(a) 70 kg
(b) 72 kg
(c) 75 kg
(d) 80 kg